

## Product datasheet for **MC228046**

### **Txnrd1 (NM\_001042513) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Txnrd1 (NM_001042513) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Txnrd1
Synonyms:	T; TR; TR1; Trx; TrxR1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC228046 representing NM\_001042513  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAATGGCTCCAAAGATCCCCCTGGTCTATGACTTCGACCTGATCATCATTGGAGGAGCTCAGGAG  
 GACTGGCAGCAGCTAAGGAGGCAGCCAAATTTGACAAGAAAGTGCTGGTCTTGGATTTTGTACACCGAC  
 TCCTCTTGGGACCAGATGGGGTCTCGGAGGAACGTGTGTGAATGTGGGTTGCATACCTAAGAAGCTGATG  
 CACCAGGCAGCTTTGCTCGGACAAGCTCTGAAAGACTCGCGCAACTATGGCTGGAAGTGAAGACACAG  
 TGAAGCATGACTGGGAGAAAATGACGGAATCTGTGCAGAGTCACATCGGCTCGCTGAACTGGGGCTACCG  
 CGTAGCTCTCCGGGAGAAAAAGTCTGTATGAGAATGCTTACGGGAGGTTTCATTGGTCTCACAGGATT  
 GTGGCGACAAATAACAAAGGTAAGAAAAAATCTATTCAGCAGAGCGGTTCTCATCGCCACAGGTGAGA  
 GGCCCCGCTACCTGGGCATCCCTGGAGACAAAGAGTACTGCATCAGCAGTATGATCTTTTCTCCTTGCC  
 TTAGTCCCGGGGAAGACCCTAGTAGTTGGTGCATCCTATGTCGCCTTGGAAATGTCAGGATTTCTGGCT  
 GGTATCGGCTTAGACGCTACTGTAATGGTGCAGTCCATTCTCCTTAGAGGATTTGACCAAGACATGGCCA  
 ACAAAATCGGTGAACACATGGAAGAACATGGTATCAAGTTTATAAGGCAGTTCGTCCTCAACGAAAATTGA  
 ACAGATCGAAGCAGGAACACCAGGCCGACTCAGGGTACTGCTCAATCCACAAACAGCGAGGAGACCATA  
 GAGGGCGAATTTAACACAGTGTGCTGGCGGTAGGAAGAGATTCTGTACGAGAATTTGGCTTAGAGA  
 CCGTGGGCGTGAAGATAAACGAAAAACCGAAAGATACCCGTCACGGATGAAGAGCAGACCAATGTGCC  
 TTACATCTACGCCATCGGTGACATCCTGGAGGGGAAGCTAGAGCTGACTCCCGTAGCCATCCAGGCGGGG  
 AGATTGCTGGCTCAGAGGCTGTATGGAGGCTCCAATGTCAAATGTGACTATGACAATGTCCCAACGACTG  
 TATTTACTCCTTTGGAATATGGCTGTTGTGGCCTCTCTGAAGAAAAAGCCGTAGAGAAATTTGGGGAAGA  
 AAATATTGAAGTTTACCATAGTTTCTTTTGGCCATTGGAATGGACAGTCCCATCCCGGGATAACAACAAA  
 TGTTATGCAAAAATAATCTGCAACCTTAAAGACGATGAACGTGTGCTGGGCTTCCACGTGCTGGGTCCAA  
 ACGCTGGAGAGGTGACGCAGGGCTTGGCGCTGCGCTCAAGTGTGGGCTGACTAAGCAGCAGCTGGACAG  
 CACCATCGGCATCCACCCGGTCTGTGCAGAGATATTCACAACGTTGTCAGTGACGAAGCGCTCTGGGGGA  
 GACATCTCCAGTCTGGCTGCTGAGGT**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM\_001042513
- Insert Size:** 1500 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_001042513.1](#), [NP\\_001035978.1](#)

**RefSeq Size:** 3417 bp

**RefSeq ORF:** 1500 bp

**Locus ID:** 50493

**UniProt ID:** [Q9JMH6](#)

**Cytogenetics:** 10 C1

**Gene Summary:** The protein encoded by this gene belongs to the pyridine nucleotide-disulfide oxidoreductase family, and is a member of the thioredoxin (Trx) system. Three thioredoxin reductase (TrxR) isozymes are found in mammals. TrxRs are selenocysteine-containing flavoenzymes, which reduce thioredoxins, as well as other substrates, and play a key role in redox homeostasis. This gene encodes an ubiquitously expressed, cytosolic form of TrxR, which functions as a homodimer containing FAD, and selenocysteine (Sec) at the active site. Sec is encoded by UGA codon that normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, the Sec insertion sequence (SECIS) element, which is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. Alternative splicing, primarily at the 5' end, results in transcript variants encoding same or different isoforms. [provided by RefSeq, May 2017]

Transcript Variant: This variant (1) represents the predominant transcript and encodes isoform 1. Variants 1-3 encode the same isoform.